

WHAT IS CLAIMED IS:

1. Highly oriented polyolefin fiber containing polyolefin with an intrinsic viscosity (in decalin at 135 °C) of at least 5 dl/g, which fiber has a tensile strength of at least 26 cN/dtex and a modulus of tension of at least 700 cN/dtex, wherein the fiber contains 0.05-5 wt. % of a solvent for the polyolefin (relative to the total fiber weight) and wherein the fiber has a creep, defined as the elongation as a percentage of the original length after 5 hours under a load of 8.11 gr/dtex at 50 °C, of at most 10%.
2. Highly oriented polyolefin fiber according to claim 1, wherein the polyolefin is polyethylene.
3. Highly oriented polyolefin fiber according to claim 2, wherein the creep is at most 5%.
4. Highly oriented polyolefin fiber according to claim 3, wherein the polyethylene is a copolymer with more than 2 short side chains per 1000 carbon atoms.
5. Highly oriented polyolefin fiber according to claim 3, wherein the polyethylene is a copolymer with more than 2 short side chains per 1000 carbon atoms.
6. Highly oriented polyolefin fiber according to claim 1, wherein the chi- parameter of the solvent for the polyolefin is lower than 0.5.
7. Highly oriented polyolefin fiber according to claim 2, wherein the chi- parameter of the solvent for the polyolefin is lower than 0.5.
8. Highly oriented polyolefin fiber according to claim 3, wherein the chi- parameter of the solvent for the polyolefin is lower than 0.5.
9. Highly oriented polyolefin fiber according to claim 1, wherein the solvent is non-volatile.

10. Highly oriented polyolefin fiber according to claim 2, wherein the solvent is non-volatile.
11. Highly oriented polyolefin fiber according to claim 3, wherein the solvent is non-volatile.
12. Highly oriented polyolefin fiber according to claim 1, wherein the solvent is a paraffin oil.
13. Highly oriented polyolefin fiber according to claim 2, wherein the solvent is a paraffin oil.
14. Highly oriented polyolefin fiber according to claim 3, wherein the solvent is a paraffin oil.
15. Highly oriented polyolefin fiber according to claim 1, wherein the fiber contains 0.1-2 wt. % of the solvent.
16. Highly oriented polyolefin fiber according to claim 2, wherein the fiber contains 0.1-2 wt. % of the solvent.
17. Highly oriented polyolefin fiber according to claim 3, wherein the fiber contains 0.1-2 wt. % of the solvent.
18. Highly oriented polyolefin fiber according to claim 1, wherein the fiber has a fineness of less than 5 denier per filament.
19. Highly oriented polyolefin fiber according to claim 2, wherein the fiber has a fineness of less than 5 denier per filament.
20. Highly oriented polyolefin fiber according to claim 3, wherein the fiber has a fineness of less than 5 denier per filament.
21. Rope comprising highly oriented polyolefin fibers according to claim 1.

22. Rope comprising highly oriented polyolefin fibers according to claim 2.
23. Rope comprising highly oriented polyolefin fibers according to claim 3.
24. Anti-ballistic shaped article comprising highly oriented polyolefin fibers according to claim 1.
25. Anti-ballistic shaped article comprising highly oriented polyolefin fibers according to claim 2.
26. Anti-ballistic shaped article comprising highly oriented polyolefin fibers according to claim 3.